

Claims

Claim 1 (Previously presented). Purified urate oxidase (uricase) that contains no more than about 2% of aggregates larger than octamers, wherein greater than about 20% of said uricase is in the tetrameric or octameric form.

Claim 2 (Original). The uricase of Claim 1, wherein the uricase is mammalian uricase.

Claim 3 (Original). The uricase of Claim 2, wherein the uricase is porcine liver, bovine liver or ovine liver uricase.

Claim 4 (Original). The uricase of Claim 1, wherein the uricase is recombinant.

Claim 5 (Previously presented). The uricase of Claim 4, wherein the uricase has the sequence of porcine, bovine, ovine or baboon liver uricase.

Claim 6 (Original). The uricase of Claim 4, wherein the uricase is chimeric.

Claim 7 (Original). The uricase of Claim 6, wherein the chimeric uricase contains portions of porcine liver and baboon liver uricase.

Claim 8 (Original). The uricase of Claim 7, wherein the chimeric uricase is PKS uricase.

Claim 9 (Previously presented). The uricase of Claim 4, wherein the uricase has the sequence as set forth in SEQ ID NO:2, wherein tyrosine 97 has been replaced by histidine.

Claim 10 (Cancelled).

Claim 11 (Withdrawn from consideration). The uricase of Claim 1, wherein the uricase is a fungal or microbial uricase.

Claim 12 (Withdrawn from consideration). The uricase of Claim 11, wherein the fungal or microbial uricase is isolated from *Aspergillus flavus*, *Arthrobacter globiformis*, *Bacillus sp.* or *Candida utilis*, or is a recombinant enzyme having the sequence of one of said uricases.

Claim 13 (Withdrawn from consideration). The uricase of Claim 1, wherein the uricase is an invertebrate uricase.

Claim 14 (Withdrawn from consideration). The uricase of Claim 13, wherein the invertebrate uricase is isolated from *Drosophila melanogaster* or *Drosophila pseudoobscura*, or is a recombinant enzyme having the sequence of one of said uricases.

Claim 15 (Withdrawn from consideration). The uricase of Claim 1, wherein the uricase is a plant uricase.

Claim 16 (Withdrawn from consideration). The uricase of Claim 15, wherein the plant uricase is isolated from root nodules of *Glycine max* or is a recombinant enzyme having the sequence of said uricase.

Claim 17 (Previously presented). A uricase conjugate comprising the uricase of Claim 1 conjugated to poly(ethylene glycol) or poly(ethylene oxide).

Claim 18 (Original). The uricase conjugate of Claim 17, wherein said poly(ethylene glycol) is monomethoxy poly(ethylene glycol).

Claim 19 (Previously presented). The uricase conjugate of Claim 17, wherein said uricase is conjugated to said poly(ethylene glycol) or poly(ethylene oxide) via a linkage selected from the group consisting of urethane (carbamate), secondary amine and amide.

Claim 20 (Original). The uricase conjugate of Claim 17, wherein said poly(ethylene glycol) or poly(ethylene oxide) has a molecular weight between about 5 kDa and 30 kDa.

Claim 21 (Original). The uricase conjugate of Claim 20, wherein said poly(ethylene glycol) or poly(ethylene oxide) has a molecular weight between about 10 kDa and 20 kDa.

Claim 22 (Previously presented). The uricase conjugate of Claim 17, wherein the average number of strands of said poly(ethylene glycol) or poly(ethylene oxide) is between about 2 and 12 per uricase subunit.

Claim 23 (Previously presented). The uricase conjugate of Claim 22, wherein the average number of strands of said poly(ethylene glycol) or poly(ethylene oxide) is between about 6 and 10 per uricase subunit.

Claim 24 (Original). The uricase conjugate of Claim 23, wherein the average number of strands of said poly(ethylene glycol) or poly(ethylene oxide) is between about 7 and 9 per uricase subunit.

Claim 25 (Original). The uricase conjugate of Claim 17, wherein the poly(ethylene glycol) or poly(ethylene oxide) is linear.

Claim 26 (Original). The uricase conjugate of Claim 17, wherein the poly(ethylene glycol) or poly(ethylene oxide) is branched.

Claim 27 (Original). A pharmaceutical composition for lowering uric acid levels in a body fluid or tissue, comprising the conjugate of Claim 17 and a pharmaceutically acceptable carrier.

Claim 28 (Original). The pharmaceutical composition of Claim 27, wherein said composition is stabilized by lyophilization and dissolves upon reconstitution to provide solutions suitable for parenteral administration.

Claims 29-36 (Cancelled).

Claim 37 (Previously presented). A purified fragment of uricase that contains no more than about 2% of aggregates larger than octamers, wherein said fragment is a recombinant uricase that has been truncated at the amino terminus, at the carboxyl terminus, or at both the amino and carboxyl termini, and wherein greater than about 20% of said truncated uricase is in the tetrameric or octameric form.

Claims 38-39 (Cancelled).

Claim 40 (Previously presented). The purified uricase of claim 1, wherein about 98% to about 100% of said uricase is in the tetrameric or octameric form.

Claim 41 (Previously presented). Isolated uricase prepared by a method comprising separating uricase aggregates larger than octamers from uricase tetramers and octamers and excluding such aggregates from the isolated uricase, wherein about 98% to about 100% of said uricase is in the tetrameric or octameric form.